WE CLAIM:

1   1.   A method for displaying data representing the operation of an exchange,

2   comprising:

3   maintaining data representing a three dimensional model of said exchange

4   trading area, said model including surfaces;

5   receiving and maintaining in a computer memory data representing

6   exchange operations;

7   generating a two dimensional display representing a selected aspect view

8   of said three dimensional model, said two dimensional display including perspective views of at

9   least some of said surfaces of said model;

10   generating alphanumeric images of selected data representing exchange

11   operations; and

12   mapping said alphanumeric images onto selected ones of said perspective

13   views.

1   2.   A method as specified in claim 1 wherein there is provided the further

2   steps of:

3   changing said selected aspect view of said three dimensional model;

4   generating a further two dimensional display representing said changed

5   aspect view, said further two dimensional display including further perspective views of at least

6   some of said surfaces of said model; and

7   mapping said alphanumeric images onto selected ones of said further

8   perspective views in said further two-dimensional display.

1   3.   A method as specified in claim 1 wherein portions of said two dimensional

2   display are selectable, said selectable display portions being operable when selected for

3   displaying further data correlated to said selectable display portions.

1   4.   A method as specified in claim 3 wherein at least some of said selectable

2   display portions comprise said perspective aspect views, and wherein said further data is

3   correlated to data represented by said alphanumeric images mapped onto said perspective aspect

4   views.

1   5.   A method for displaying data representing the operation of an exchange

2   having a trading area including a plurality of trading posts whereat selected securities are traded,

3   comprising:

4   maintaining data representing a three-dimensional model of said exchange

5   trading area, said model including model portions representing said trading posts;

6   receiving and maintaining in a computer memory data representing trading

7   of said securities; and

8   generating a two dimensional display representing a selected aspect view

9   of said three dimensional model, said selected aspect view including one or more of said model

10 portions representing said trading posts, said model portions having selectable parts being

11 selectable and operative when selected to display further data from said computer memory

12 correlated to said selected parts.

1   6.   A method as specified in claim 5, wherein said model portions

2 representing said trading posts include surfaces and wherein said step of generating a two-

3 dimensional display further comprises

4   generating alphanumeric images relating to securities traded at a selected

5 trading post and mapping said alphanumeric images into selected ones of said surfaces in said

6 two-dimensional display, and wherein said surfaces being operative when selected to display

7 further data correlated to said related securities.

1   7.   A method as specified in claim 4, wherein said alphanumeric images

2 comprise identification of said securities.

1   8.   A method as specified in claim 5, further comprising

2   analyzing said data representing trading of said securities and identifying

3 exceptional conditions relating thereto, generating image portions representing said exceptional

4 conditions, and displaying said exceptional condition image portions in said two-dimensional

5 display in correlation with display of model portions representing said trading posts at which said

6 securities are traded.

1   9.   A method as specified in claim 8 wherein said exceptional condition

2   image portions are selectable and operative when selected to display further data concerning said

3   exceptional condition.

1   10.   A method as specified in claim 5, further comprising

2   monitoring data processing systems used in said exchange;

3   identifying exceptional conditions in said data processing systems and the

4   locations of said exchange effected by said exceptional conditions;

5   generating image portions representing exceptional conditions of said data

6   processing systems and displaying said exceptional condition image portions in said two

7   dimensional display in correlation with said location of said exchange.

1   11.   A system for providing an interactive display of data relating to trading on

2   an exchange having at least one data source, comprising:

3   a computer system, configured and programmed to:

4   (a) maintain data representing a three dimensional model of said

5   exchange trading area, said model including surfaces;

6   (b) receive data from said at least one data source;

7   (c) format and normalize said data to provide formatted data of a

8   predetermined format;

9   (d) store and update said formatted data in at least one memory

10   area;

11   (e) generate a two dimensional display image of a three

12   dimensional model from a selected aspect view, said display image having perspective views of

13   at least some of said surfaces of said model;

14   (f) generate alphanumeric images of selected data;

15   (g) map said alphanumeric images onto selected ones of said

16   perspective views;

17   (h) receive commands designating said aspect view and for

18   retrieving further data and updating said display image;

19   a control station for use by an operator to provide input commands to said

20   computer system, including commands for selecting said aspect view; and

21   at least one monitor for displaying said display image.

1   12.   A system for providing an interactive display of data as specified in claim

2   11 wherein the computer system is further configured and programmed to:

3   change said selected aspect view of said three dimensional model;

4   generate a further two dimensional display representing said changed

5   aspect view, said further two dimensional display including further perspective views of at least

6   some of said surfaces of said model; and

7   map said alphanumeric images onto selected ones of said further

8   perspective views in said further two-dimensional display.

1   13.   A system for providing an interactive display of data as specified in claim

2   11 wherein portions of said two dimensional display are selectable, said selectable display

3   portions being operable when selected for displaying further data correlated to said selectable

4   display portions.

1   14.   A system for providing an interactive display of data as specified in claim

2   13 wherein at least some of said selectable display portions comprise said perspective aspect

3   views, and wherein said further data is correlated to data represented by said alphanumeric

4   images mapped onto said perspective aspect views.

1   15.   A system for displaying data representing the operation of an exchange

2   having a trading area including a plurality of trading posts whereat selected securities are traded,

3   comprising a computer system, configured and programmed to:

4   maintain data representing a three-dimensional model of said exchange

5   trading area, said model including model portions representing said trading posts;

6   receive and maintain in a computer memory data representing trading of

7   said securities; and

8   generate a two dimensional display representing a selected aspect view of

9   said three dimensional model, said selected aspect view including one or more of said model

10   portions representing said trading posts, said model portions having selectable parts being

11   selectable and operative when selected to display further data from said computer memory

12   correlated to said selected parts.

1   16.   A system for displaying data representing the operation of an exchange as

2   specified in claim 15, wherein said model portions representing said trading posts include

3   surfaces and wherein the computer system is further configured and programmed to

4   generate alphanumeric images relating to securities traded at a selected

5   trading post and map said alphanumeric images into selected ones of said surfaces in said two-

6   dimensional display, and wherein said surfaces being operative when selected to display further

7   data correlated to said related securities.

1   17.   A system for displaying data representing the operation of an exchange as

2   specified in claim 16, wherein said alphanumeric images comprise identification of said

3   securities.

1   18.   A system for displaying data representing the operation of an exchange as

2   specified in claim 15, wherein the computer system is further configured and programmed to:

3   analyze said data representing trading of said securities and identifying

4   exceptional conditions relating thereto;

5   generate image portions representing said exceptional conditions; and

6   display said exceptional condition image portions in said two-dimensional

7   display in correlation with said display of model portions representing said trading posts at which

8   said securities are traded.

1   19.   A system for displaying data representing the operation of an exchange as

2   specified in claim 18 wherein said exceptional condition image portions are selectable and

3   operative when selected to display further data concerning said exceptional condition.

1   20.   A system for displaying data representing the operation of an exchange as

2   specified in claim 15, wherein the computer system is further configured and programmed to

3   monitor data processing systems used in said exchange;

4   identify exceptional conditions in said data processing systems and the

5   locations of said exchange effected by said exceptional conditions;

6   generate image portions representing exceptional conditions of said data

7   processing systems; and

8   display said exceptional condition image portions in said two dimensional

9   display in correlation with said location of said exchange.